

INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)



Applicant's or agent's file reference 57402WO003	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US02/38020	International filing date (day/month/year) 27.11.2002	Priority date (day/month/year) 21.01.2002
International Patent Classification (IPC) or both national classification and IPC D06M15/277		
Applicant 3M INNOVATIVE PROPERTIES COMPANY		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(II) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 06.08.2003	Date of completion of this report 28.10.2003
Name and mailing address of the International preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Fiocco, M Telephone No. +31 70 340-4538 

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International application No. **PCT/US02/38020**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-28 as originally filed

Claims, Numbers

1-12 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

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**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1-12
	No: Claims	
Inventive step (IS)	Yes: Claims	1-12
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-12
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following document:

D1: D1: WO 94 24179 A (DU PONT) 27 October 1994 (1994-10-27)

1) CLAIM 1

Document **D1**, which is considered to represent the most relevant state of the art, discloses (cf. **page 2, line 1 - page 3, line 4** and **examples**) a method of treating a fabric from which the subject-matter of claim 1 differs in that:

- a) the C3-C4 perfluoroalkyl(meth)acrylates account for 10 to 97 mole% of the copolymer. It is not possible to calculate accurately this proportion in D1, since a proportion is only given of C3-C6 perfluoroalkyl(meth)acrylates without distinction; and
- b) the sum of (a), (b) and (c) sums up to 100 % (in D1 a mixture of perfluoroalkyl(meth)acrylates is used).

The subject-matter of claim 1 is therefore novel (Article 33(2) PCT).

The technical effect obtained from the above mentioned features a) and b) is that the composition is more biodegradable, while providing comparable water and oil repellency (cf. present application, page 3, line 29 - page 4, line 19).

The problem to be solved by the present invention may therefore be regarded as to provide water and oil repellency to textiles or nonwovens with an environmentally friendlier composition.

The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons: none of the cited documents discloses, nor fairly suggests, the use of copolymers of short-chain perfluoroalkyl(meth)acrylates with vinyl(idene) chloride for the treatment of fabrics, nor the problem defined above is addressed.

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2) Claims 2-11 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

3) Claim 12 is characterized by the subject-matter of claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.